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**REMARKS**

Claims 1-89 are pending in the present application. Claims 7 and 14 have been cancelled and Claims 1, 8, 11, 15, 17, 29, 40, 61-63 and 76-78 have been amended, leaving Claims 1-6, 8-13 and 15-89 for consideration upon entry of the present Amendment.

Support for these amendments can be found on at least page 7, lines 4-8; page 8, lines 4-7, claim 7, and Figures 1-7. No new matter has been introduced by these amendments.

Reconsideration and allowance of the claims is respectfully requested in view of the above amendments and the following remarks.

Statement of Support by Line and Page Number for Previous Amendments

The Examiner has requested that the applicants point out support for each previously amended embodiment by page and line number. The applicants have submitted two preliminary amendments, the first being on July 15, 2002 and the second being on May 12, 2003.

With regard to the first preliminary amendment, support for each of the amendments is provided as follows:

The support for the amendments to claims 19 and 42 is found on at least page 19, line 11.

The amendment to claim 60 is provided with support on at least line 1 of claim 45 found on page 36.

Claims 63-89 have support on at least page 7, line 22 and in Figures 4-6.

With regard to the second preliminary amendment, support for each of the amendments is provided as follows:

The amendment to claim 1 has support for which is found on page 4, line 3.

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Claims 2-10, and 12-16 were amended to make the typographical change of the word "An" to the word "The" or the typographical change of the word "A" to "The". No support is deemed necessary for these typographical changes.

Claims 2, 11, 17, 40, 61 and 62 were amended to provide for an "electrically and thermally conductive core" and support for that amendment is found at least on page 4, line 3.

Claims 5, 6, 11, 12, 13, 15, 34, 39, 60, 73, 75 and 89 were amended to place the word "a", "an" or "the" in front of members of the group listed in the claim. The support for this amendment is found at least in that the original claim provided support for the general class listed, i.e., fuel gas. Therefore, the addition of the word "a", "an" or "the" is a mere typographical addition to indicate a singular amount of the previously disclosed plural classes of, i.e., "fuel gas".

Claims 9, 10, and 43 were further typographically amended to insert the term "electrochemical cell" and in claim 9 to remove the term "fuel". Support for these amendments can be found in claim 1 where the term "electrochemical" is clearly used.

Claims 10, 49, 72, 86 were further typographically amended to change the word "where" to "wherein" and/or to state "a" volume resistivity, or "a" volume-to-volume ratio. The latter finds support in at least claim 20.

Claim 10 was further amended to remove the word polymer to read "electrically conductive support"; support for which is found on at least page 5, line 14.

The amendment to claim 11, in addition to that mentioned above, finds support on page 2, line 14 and on page 4, line 2. Claim 12 finds support in at least the same places as is noted above for claim 11.

The amendment to claim 15 is now moot, in that claim 15 has been amended to depend from claim 11 as originally claimed.

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Claims 19, 27, 42, 49, 51, 62, 66, 67, 73, 80, and 87 were amended to include the term "electrically conductive filler" which finds support on at least on page 4, lines 4-5 and on page 4, line 18 and the term "wherein" is inserted in Claim 19 as a minor typographical correction for which no support is deemed necessary.

Claims 22, 24, 69, 72, 73, 83, and 85-87 were amended to change the word "polymer" to "polymeric" and this amendment can find support on at least page 14, lines 19-20.

The amendment to claim 25 finds support in at least claim 24.

The amendment to claim 27 finds support on at least page 14, line 10.

Claim 29 was amended to include the term "of" which was a mere typographical correction, which requires no support.

Claim 34 was further amended to put a period at the end of the claim, which requires no support.

Claim 36 was amended to include a needed space.

Claims 37, 44, 47, 53, 59, 61, 69, 73, and 87 also contain various minor typographical corrections, which require no support.

The amendment to claim 38 finds support in at least claim 24.

Claim 42 was further amended to include the term "polymer" which finds support in least claim 40.

The amendment to claim 44 can find support in at least claim 40.

Claim 51 was further amended to include the phrase "a total volume of" which finds support on at least page 19, line 20.

The amendments to claim 61 find support on at least page 4, line 3 and on page 14, lines 19-20.

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Claims 63, 64, 66, 69, 71-73, 75, 77, 80, 83, 85-87 and 89 were amended to include the term "first" and/or "second"; support for which is found as stated above in page 7, line 22 and in Figures 4-6, as well as in Figures 1-3 and 7- 10 and in claim 63.

Claim 67 was amended to change the dependency to claim 66, which finds support in at least claim 66.

The amendment to claim 68 finds support in claim 63.

Claims 73 and 87 were further amended to include the phrase "volume of the first conductive" or "volume of the first", support for which is found at least on page 19, lines 20-21 and as noted above for the term "first", on page 7, line 22 and in Figures 4-6, as well as in Figures 1-3 and 7- 10 and in claim 63.

Claim 76 was amended to include the phrase "to form a polymeric composite" which finds support on at least page 8, lines 9-10.

Claim 77 was amended to delete the term "at least one" which finds support in at least claim 63 and the above noted support for the term "first".

The amendment to claim 82 finds support in claim 63.

Claim 83 was amended to include the phrase "when molded", which finds support on at least page 14, lines 19-20.

Claim Rejections Under 35 U.S.C. § 103(a)

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a *prima facie* case of obviousness, i.e., that all elements of the invention are disclosed in the prior art; that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references; and that the proposed modification of the prior art had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *In re Fine*,<sup>5</sup>

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U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Claims 1-10, 11-16, 17-39, 40-60, 61, 62, 63-76 and 77-89 with the broadest independent claim 1 as the main invention are rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over British Patent No. 1,187,282, hereinafter "British Patent", Ledjeff et al. (5,733,678), hereinafter "Ledjeff" and Landi et al. (5,223,568), hereinafter "Landi".

The Examiner has stated that the British Patent discloses, teaches and suggests a structure comprising at least two different kinds of materials being next to or substantially next to each other. (See Office Action, page 4, paragraph 2) The applicants respectfully submit that the British Patent does not disclose, "a heat transfer area extending beyond the active area" as is presently recited in claims 1, 11, 17, 63, 76 and 77. Ledjeff alone or in combination with Landi does not cure the deficiencies of the British Patent. It is therefore submitted, that in light of the above amendments and the foregoing remarks, the stated rejections are moot and withdrawal of the rejections of claims 1-10, 11-16, 17-39, 40-60, 61, 62, 63-76 and 77-89 is respectfully requested.

Claims 1-10, 11-16, 17-39, 40-60, 61, 62, 63-76 and 77-89 with the broadest independent claim 1 as the main invention are rejected under 35 U.S.C. § 103(a), as being unpatentable over Ledjeff and Landi. Claims 1, 11, 17, 63, 76 and 77 have been amended as indicated above, thereby rendering this rejection moot. As stated above, Ledjeff alone or in combination with Landi does not disclose the currently claimed invention. In light of the current amendments and the foregoing remarks the rejection of claims 1-10, 11-16, 17-39, 40-60, 61, 62, 63-76 and 77-89 are deemed to be moot and withdrawal of the rejection is respectfully requested.

Claims 1-10, 11-16, 17-39, 40-60, 61, 62, 63-76 and 77-89 with the broadest independent claim 1 as the main invention are rejected under 35 U.S.C. § 103(a), as being unpatentable over Olsen (5,578,399), hereinafter "Olsen", Ledjeff and Landi.

The same arguments applied above to Ledjeff and Landi apply with equal force to Fronk. Olsen does not disclose "a heat transfer area extending beyond the active area" as is presently

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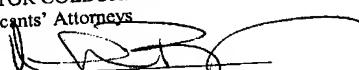
recited in claims 1, 11, 17, 63, 76 and 77. Therefore, Olsen does not cure the deficiencies of Ledjeff and/or Landi. In light of the current amendments and foregoing remarks the rejection of claims 1-10, 11-16, 17-39, 40-60, 61, 62, 63-76 and 77-89 are deemed to be moot and withdrawal of the rejection is respectfully requested.

Claims 1-10, 11-16, 17-39, 40-60, 61, 62, 63-76 and 77-89 with the broadest independent claim 1 as the main invention are rejected under 35 U.S.C. § 103(a), as being unpatentable over Fronk et al. (6,372,376), hereinafter "Fronk", Ledjeff and Landi.

The same arguments applied above to Ledjeff and Landi apply with equal force herein. Fronk does not disclose, "a heat transfer area extending beyond the active area" as is presently recited in claims 1, 11, 17, 63, 76 and 77. Therefore, Fronk does not cure the deficiencies of Ledjeff and/or Landi. In light of the current amendments and foregoing remarks the rejection of claims 1-10, 11-16, 17-39, 40-60, 61, 62, 63-76 and 77-89 are deemed to be moot and withdrawal of the rejection is respectfully requested.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130.

Respectfully submitted,  
CANTOR COLBURN LLP  
Applicants' Attorneys  
By   
Leah M. Reimer  
Registration No.39,341

Jaksha C. Tomic  
Registration No.53,696

Date: June 9, 2004  
Customer No.: 23,413  
Telephone: (860) 286-2929